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Guidance notes for the Onshore
Pipeline Regulations, 1999

National Energy
Board

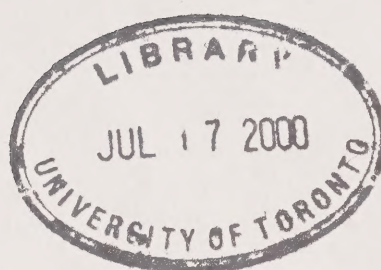


Office national
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Guidance Notes for the

Onshore Pipeline Regulations, 1999

Canada



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GUIDANCE NOTES FOR THE ONSHORE PIPELINE REGULATIONS, 1999

PREAMBLE

Pursuant to subsection 48(2) of the *National Energy Board Act*, the National Energy Board (Board or NEB) may make regulations governing the design, construction, operation and abandonment of a pipeline and providing for the protection of property and the environment and the safety of the public and of the company's employees in the construction, operation and abandonment of a pipeline.

The 1999 version of the *Onshore Pipeline Regulations* (OPR-99) is more goal oriented and less prescriptive than earlier versions. The OPR-99 outlines requirements which must be met by pipeline companies. The attached guidance notes are not compulsory requirements, but were developed to provide assistance to interested parties in complying with the requirements of the OPR-99. For clarity, the text of each regulation is enclosed by a border with the accompanying guidance note immediately below. Where regulations are self-explanatory, no guidance note is provided. The goal of each regulation and the intent of each accompanying guidance note are included.

The guidance notes are included for assistance and should not be used as a formal checklist for compliance with the OPR-99. They should be viewed as examples of acceptable practices which could be considered when developing specifications and procedures to meet each regulation. The actual methods used to meet the specific requirements are at the discretion of individual companies, but the onus will be on each company to maintain adequate records and demonstrate to the Board, when requested, the adequacy and effectiveness of the methods employed. The level of detail of the information to be retained by the company and/or filed with the Board should correspond to the nature, magnitude, and potential impact of the activity being conducted. The use of widely accepted standard procedures, such as those published by the Canadian Standards Association, is encouraged.

The Board intends to ensure compliance with the OPR-99 by auditing specifications, procedures, records and training programs, developed by companies, and performing inspections during the construction and operation of pipelines.



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Interpretation

GOAL: To provide definitions for terms used in these Regulations.

1. The definitions in this section apply in these Regulations.

"abandon" means to remove permanently from service. (*cessation d'exploitation*)

"Act" means the *National Energy Board Act*. (*Loi*)

"change of service" means a change in the type of fluid transported in the pipeline, which necessitates changes to the design requirements in accordance with CSA Z662. (*modification du service*)

"class location" means a class location as defined in CSA Z662 and as determined in accordance with that standard. (*classe d'emplacement*)

"component" means a component as defined in CSA Z662. (*élément*)

"CSA" means the Canadian Standards Association. (*CSA*)

"CSA W178.2" means CSA Standard W178.2 entitled Certification of Welding Inspectors, as amended from time to time. (*norme CSA W178.2*)

"CSA Z276" means CSA Standard Z276 entitled Liquefied Natural Gas (LNG) - Production, Storage and Handling, as amended from time to time. (*norme CSA Z276*)

"CSA Z341" means CSA Standard Z341 entitled Storage of Hydrocarbons in Underground Formations, as amended from time to time. (*norme CSA Z341*)

"CSA Z662" means CSA Standard Z662 entitled Oil and Gas Pipeline Systems, as amended from time to time. (*norme CSA Z662*)

"deactivate" means to remove temporarily from service. (*mettre hors service*)

"environment" means elements of the Earth and includes

- (a) land, water and air, including all layers of the atmosphere;
- (b) all organic and inorganic matter and living organisms; and
- (c) the interacting natural systems that include elements referred to in paragraphs (a) and (b). (*environnement*)

"HVP" means high vapour pressure as defined in CSA Z662. (*HPV*)

"incident" means an occurrence that results in

- (a) the death of or serious injury to a person;
- (b) a significant adverse effect on the environment;
- (c) an unintended fire or explosion;
- (d) an unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m³;
- (e) an unintended or uncontrolled release of gas or HVP hydrocarbons; or
- (f) the operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board. (*incident*)

"inspection officer" means an inspection officer designated by the Board under section 49 of the Act. (*inspecteur*)

"joining" means the joining of pipe and components, performed after the pipe and component manufacturing processes. (*assemblage*)

"LVP" means low vapour pressure as defined in CSA Z662. (*FPV*)

"maximum operating pressure" means maximum operating pressure as defined in CSA Z662. (*pression maximale de service*)

"onshore pipeline or pipeline" means a pipeline intended for the transmission of hydrocarbons that is not in an offshore area. (*pipeline terrestre ou pipeline*)

"operate" includes repair, maintain, deactivate and reactivate. (*exploiter*)

"release" includes discharge, spray, spill, leak, seep, pour, emit, dump, and exhaust. (*rejet*)

"serious injury" includes an injury that results in

- (a) the fracture of a major bone;
- (b) the amputation of a body part;
- (c) the loss of sight in one or both eyes;
- (d) internal haemorrhage;
- (e) third degree burns;
- (f) unconsciousness; or
- (g) the loss of a body part or function of a body part. (*blessure grave*)

"station" means a facility that is used in connection with the operation of a pipeline, and includes a facility for pumping, compression, pressure reduction, storage of hydrocarbons, metering, receiving or delivering. It also includes the land and other works connected with the facility. (*station*)

"storage facility" means a facility that is constructed for the storage of oil and includes the land and other works connected with the facility. (*installation de stockage*)

"toxic substance" means a substance that enters the environment in a quantity or concentration that may

- (a) have an immediate or long-term adverse effect on the environment;
- (b) constitute a danger to the environment on which human life depends; or
- (c) constitute a danger to human life or health. (*substance toxique*)

Application

GOAL: To provide the scope of the application of these Regulations.

- 2. Subject to section 3, these Regulations apply to onshore pipelines designed, constructed, operated or abandoned after the coming into force of these Regulations.

GUIDANCE NOTE

INTENT: To assist in the understanding of the scope of the Regulations.

Companies are referred to the definition of "pipeline" in the *National Energy Board Act*.

GOAL: To ensure there is no retroactive application of these Regulations.

- 3.
 - (1) Subject to subsection (2), Parts 1 to 5 apply in respect of any construction, maintenance or repairs undertaken with respect to a pipeline.
 - (2) Parts 1 to 5 do not apply in respect of a pipeline or any part of a pipeline
 - (a) that exists on the coming into force of these Regulations; or
 - (b) for which an authorization to construct, maintain or repair it was issued on or before the coming into force of these Regulations.

General

GOAL: To ensure pipelines are designed, constructed, operated and abandoned according to these Regulations and appropriate standards.

4. (1) When a company designs, constructs, operates or abandons a pipeline, or contracts for the provision of those services, the company shall ensure that the pipeline is designed, constructed, operated or abandoned in accordance with the applicable provisions of
 - (a) these Regulations;
 - (b) CSA Z276, if the pipeline transports liquefied natural gas;
 - (c) CSA Z341 for the underground storage of hydrocarbons; and
 - (d) CSA Z662, if the pipeline transports liquid or gaseous hydrocarbons.
- (2) Without limiting the generality of subsection (1), the company shall ensure that the pipeline is designed, constructed, operated or abandoned in accordance with the design, specifications, programs, manuals, procedures, measures and plans developed and implemented by the company in accordance with these Regulations.
- (3) If there is an inconsistency between these Regulations and a standard referred to in paragraph (1) (b), (c) or (d), these Regulations prevail to the extent of the inconsistency.

GUIDANCE NOTE

INTENT: To clarify the responsibility of the party which obtains the Certificate or Order.

The word "company" bears the same meaning in these Guidance Notes and in the OPR-99 as it does in the *National Energy Board Act*. Thus, the company which holds the Certificate or the Order must take all reasonable steps to ensure that all agents, contractors, operators, etc. are aware of and comply with the OPR-99, follow good environmental practices and obtain all necessary approvals and permits as required.

A standard is considered to have been adopted when it has been formally published.

GOAL: To outline the Board's authority in ordering changes.

5. If a company is required by these Regulations to develop a design, specification, program, manual, procedure, measure or plan, the Board may order amendments to it if the Board considers it necessary for safety or environmental reasons or if it is in the public interest to do so.

GOAL: To ensure changes are monitored on a continuous and timely basis as required.

6. A company shall develop and apply a program to monitor changes in respect of designs, specifications, standards or procedures.

GOAL: To outline situations under which the Board may require information to be filed.

7. For the purposes of these Regulations, the Board may require a company or person to submit a design, specification, program, manual, procedure, measure, plan or document to the Board if
- (a) the company makes an application to the Board under Part III or V of the Act; or
 - (b) the Board receives any information that the design, construction, operation or abandonment of a pipeline, or any part of a pipeline, is or may cause
 - (i) a hazard to the safety of the public or to the employees of the company; or
 - (ii) a detriment to the environment or to property.

GOAL: To ensure a consistent level of safety and protection is provided for all pipelines.

8. (1) Designs, specifications, programs, manuals, procedures, measures or plans for which no standard is set out in these Regulations shall be submitted by a company or person to the Board for approval.
- (2) The Board shall approve a design, specification, program, manual, procedure, measure or plan if
- (a) it provides for a level of safety or protection at least equivalent to the level of safety or protection generally provided for by a comparable CSA standard, or by another applicable standard; or
 - (b) in the absence of a comparable CSA or other applicable standard, it provides for a level of safety or protection that is adequate in the circumstances.

GUIDANCE NOTE

INTENT: To identify potentially applicable design criteria and clarify the need to obtain Board approval for non-standard designs, specifications, programs, manuals, procedures, measures or plans.

Section 8 is not retroactive. It provides a mechanism, in future situations, for the approval of designs, specifications, programs, manuals, procedures, measures or plans where none of the standards referred to in these regulations apply.

For example, with respect to the design criteria for noise or emission levels, the company should identify any applicable or adopted federal, provincial and municipal legislation and guidelines or, in the absence of legislation and guidelines, the company standard that the facility has been designed to, or would be operated in accordance with, and submit that information to the Board for approval. The information provided should clearly demonstrate how the facility would be in compliance with this regulation.

PART 1

DESIGN OF THE PIPELINE

Detailed Designs

GOAL: To ensure appropriate designs are developed for all pipelines.

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| 9. A company shall develop detailed designs of the pipeline and submit them to the Board when required to do so under section 7. |
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GUIDANCE NOTE

INTENT: To clarify that designs must demonstrate the provision for acceptable levels of safety and protection.

Detailed designs and supporting information should clearly demonstrate compliance with all pertinent and current regulations, codes and standards. The detailed designs should also clearly demonstrate that the design submitted for the pipe and/or components of the pipeline is safe for its intended purpose and provides for the protection of property and the environment, and the safety of the public and of the company's employees.

HVP Pipelines

GOAL: To ensure an acceptable level of safety is provided for in the vicinity of railways and roadways.

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| 10. (1) When an HVP pipeline is to be situated in a Class 1 location and within 500 m of the right-of-way of a railway or paved roadway, a company shall develop a documented risk assessment to determine the need for heavier wall design, taking into account such factors as pipeline diameter and operating pressure, HVP fluid characteristics, topography, and traffic type and density of the traffic on the railway or paved road. |
| (2) A company shall submit a documented risk assessment to the Board when required to do so under section 7. |

GUIDANCE NOTE

INTENT: To provide assistance regarding what factors should be included for the determination of acceptable levels of risk.

For assistance in preparing the documented risk assessment, companies are directed to CSA Z662, Appendix B, Guidelines for Risk Assessment of Pipelines. The nature and magnitude of the risk assessment should be commensurate with the nature, magnitude and potential impact of the activity being conducted and could consider factors such as:

- (a) composition of the fluid;
- (b) topography;
- (c) population densities;
- (d) environmental setting; and
- (e) public interest.

The risk assessment should be documented and kept as part of the company records.

Stations

GOAL: To ensure appropriate design considerations are used for all stations.

11. A station shall be
 - (a) designed to provide year-round suitable access for personnel;
 - (b) designed to prevent unauthorized entry to and unauthorized operation of the station;
 - (c) equipped with facilities for the containment, handling and disposal of wastes incidental to the station's operation; and
 - (d) designed so that the noise level during operations meets the noise level requirement approved by the Board pursuant to section 8.

GOAL: To ensure stations are capable of being isolated from the rest of the pipeline system in a safe manner in all situations.

12. A compressor station or pump station shall be equipped with an alternate source of power capable of
 - (a) operating the station's emergency shut-down system;
 - (b) operating an emergency lighting system for the safe evacuation of personnel from the station and for other emergency procedures; and
 - (c) maintaining any other service essential to the safety of personnel or the public or the protection of the environment.

Storage Facilities

GOAL: To ensure storage facilities are properly located and designed safely.

13. A storage facility shall
 - (a) be located in an area that is known to be free from flooding, landslides, rockfalls and geological faults;
 - (b) be serviced by an all-weather road that gives access to all permanently installed fire-fighting equipment located at or near the storage facility; and
 - (c) have a containment area designed to prevent the release or migration of stored products or toxic substances.

GUIDANCE NOTE

INTENT: To highlight key design considerations.

The location of a storage facility should be chosen so as to maximize employee and public safety, and to minimize environmental damage, including any threats to the quality of surface water and groundwater, environmentally sensitive areas, and the health of humans, animals and plants during the construction, operation, deactivation or abandonment of the storage facility. General construction considerations for storage facilities should also meet the requirements of the applicable standards referred to in section 4.

PART 2

MATERIALS

Specifications

GOAL: To ensure that material characteristics and specifications for the pipe and components meet the applicable safety and operational requirements.

14. A company shall develop specifications for the pipe and components to be used in the pipeline and shall submit them to the Board when required to do so under section 7.

GUIDANCE NOTE

INTENT: To provide examples of the parameters which could be considered when developing the specifications.

The specifications should provide for a level of safety at least equivalent to the level of safety generally provided for by the applicable standards referred to in section 4 and could include:

- (a) the design parameters and operating conditions, such as pressure, range of design temperature, outer diameter, wall thickness and location factor;
- (b) the type of service and fluid composition where it affects material selection;
- (c) the specified material properties such as specified minimum yield strength, ultimate tensile strength, elongation, fracture toughness and special properties for special service (e.g., sour service);
- (d) a description of the pipe and component manufacturing process including welding;
- (e) a list of applicable codes and standards used;
- (f) for the coatings to be applied on the pipe and components to be used on the pipeline:
 - (i) the type of coating and its thickness,
 - (ii) a description of the application process, and
 - (iii) the production test requirements; and
- (g) any other pertinent information.

Quality Assurance Program

GOAL: To ensure all pipe and components meet the specifications developed under section 14.

15. A company shall develop a quality assurance program for the purpose of ensuring that the pipe and components to be used in the pipeline meet the specifications referred to in section 14.

GUIDANCE NOTE

INTENT: To outline issues which could be considered when developing the QA Program.

There are two parts to a quality assurance (QA) program; the QA program of the product supplier or manufacturer, and the QA program of the pipeline company. The QA program may comprise the requirements of a recognized standard, such as the ISO 9000 series of QA standards and could include:

- (a) a description of the QA program used during the product manufacture, delivery, commissioning and installation;
- (b) a description of the qualifications of inspectors;

- (c) a list of the applicable codes and standards used; and
- (d) the product acceptance criteria.

For small orders of pipe and components all of the items (a) to (d) may not apply.

PART 3

JOINING

Joining Program

GOAL: To ensure that joining is designed and conducted in a manner that will ensure quality and integrity.

16. A company shall develop a joining program in respect of the joining of pipe and the components to be used in the pipeline and shall submit it to the Board when required to do so under section 7.

GUIDANCE NOTE

INTENT: To outline issues which could be addressed when developing the joining program.

The joining program should meet the requirements of the applicable standards referred to in section 4 and, where applicable, could include a description of:

- (a) the joining procedure specifications;
- (b) the requirements for the qualification of joining procedures;
- (c) the requirements for the qualification of joiners;
- (d) the requirements for the qualification and duties of joining inspectors;
- (e) the number of joining inspectors that will be employed;
- (f) the non-destructive examination procedures;
- (g) the requirements for the qualification of the personnel engaged in non-destructive examination;
- (h) the standards of acceptability of imperfections;
- (i) the procedures for the repair or removal of joining defects; and
- (j) any other pertinent information.

It is recommended that the company have at least one copy of the joining program both in the field, and in the operation offices, during field joining operations.

Non-destructive Examination

GOAL: To ensure the integrity of each joint is assured.

17. When a company conducts joining on a pipeline, the company shall examine the entire circumference of each joint by radiographic or ultrasonic methods.

PART 4

CONSTRUCTION

Construction Safety

GOAL: To ensure a link exists between the company and any third party retained to provide services during construction.

18. (1) If a company contracts for the provision of services in respect of the construction of a pipeline, the company shall
- (a) inform the contractor of all special conditions associated with the construction;
 - (b) inform the contractor of all special safety practices and procedures necessitated by the conditions or features specific to the construction;
 - (c) take all reasonable steps to ensure that construction activities are conducted in accordance with the manual developed under section 20; and
 - (d) authorize a person to halt a construction activity in circumstances where, in the person's judgement, the construction activity is not being conducted in accordance with the manual developed under section 20 or is creating a hazard to anyone at the construction site.
- (2) The person referred to in paragraph (1) (d) must have sufficient expertise, knowledge, and training to competently carry out the obligations set out in that paragraph.

GOAL: To ensure pipelines are constructed in a safe and environmentally responsible manner.

19. A company shall, during the construction of a pipeline, take all reasonable steps to ensure that
- (a) the construction activities do not create a hazard to the public or the environment; and
 - (b) all persons at the construction site who are not involved in the construction of the pipeline are informed of the practices and procedures that are to be followed for their safety.

GOAL: To ensure that detailed safety procedures are developed and made available to all interested parties.

20. (1) A company shall develop a construction safety manual and shall submit it to the Board.
- (2) A company shall keep a copy of the construction safety manual or the relevant parts of it at each construction site of the pipeline, in a location where it is accessible to every person engaged in construction at the site.

GUIDANCE NOTE

INTENT: To provide an outline of issues that could be addressed in the construction safety manual.

The construction safety manual could set out:

- (a) the safety related responsibilities of company and contractor managers, supervisors and workers;
- (b) a description of the method or program established by the company to fulfil its responsibilities under sections 18 and 19;
- (c) the safety practices and procedures to be followed in the construction of the pipeline;

- (d) the name(s) or position(s) of the person(s) with suitable qualifications responsible for safety inspections during pipeline construction; and
- (e) the name(s) or position(s) of the person(s) authorized to halt a construction activity under the requirement of paragraph 18 (d).

Companies are encouraged to submit their construction safety manual to the Board at least four weeks prior to anticipated start of construction activities. Practices set out in the construction safety manual should meet applicable federal and provincial Occupational Health and Safety requirements. For additional guidance, companies are referred to the "Approved Safety Manual for Pipeline Construction in Canada", issued by the Pipe Line Contractors Association of Canada, as amended from time to time.

Right-of-way and Temporary Work Areas

GOAL: To ensure that construction activities do not have a permanent negative effect on current land use patterns, where practicable.

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| 21. After a pipeline is constructed, the right-of-way and temporary work areas of the pipeline shall be restored to a condition similar to the surrounding environment and consistent with the current land use. |
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Crossing a Utility or Private Road

GOAL: To ensure that other utilities are not negatively affected by pipeline construction.

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| 22. When a pipeline is constructed across a utility or private road, the company constructing the pipeline shall ensure that there is no undue interference with the use of the utility or road during construction. |
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GUIDANCE NOTE

INTENT: To provide additional guidance with respect to crossing matters.

For additional requirements concerning crossing matters, companies are directed to the Board's *Pipeline Crossing Regulations*, and the related guidance document "Excavation and Construction Near Pipelines".

PART 5

PRESSURE TESTING

Pressure Testing Program

GOAL: To ensure an acceptable pressure testing program is developed which, when followed, will assist in proving the integrity of the pipeline.

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| 23. Before putting a pipeline into service, a company shall develop a program in respect of pressure tests to be conducted for pipe and components used in its pipeline, and shall submit it to the Board when required to do so under section 7. |
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GUIDANCE NOTE

INTENT: To outline items which could be considered when developing a pressure testing program.

The pressure testing program must meet the requirements of the applicable standards referred to in section 4 and could include:

- (a) a diagram of the test section together with an elevation profile and the location of all testing points and instrumentation;
- (b) the specifications of the pipe and components of the pipeline to be tested;
- (c) a description of the instruments to be used, the degree of accuracy and the calibration data and certificates of those instruments;
- (d) the procedures to be used during line filling, pressurization, depressurization, dewatering and the associated environmental protection procedures to be implemented;
- (e) an identification of the test medium and any additives;
- (f) the test duration;
- (g) the minimum and maximum permitted test pressures;
- (h) the standards of acceptability;
- (i) a description of the safety precautions to be implemented during the pressure test; and
- (j) any other pertinent information.

Permits for Use and Disposal of Water

GOAL: To ensure the issue of hydrostatic test water use and disposal is adequately addressed.

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| 24. Before conducting a pressure test, a company shall obtain any permits required in respect of the use and disposal of water for test purposes. |
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GUIDANCE NOTE

INTENT: To provide a reference for the development of a water use and disposal plan.

Companies are directed to federal, provincial and local authorities to determine their specific requirements for water use and disposal. For assistance with developing a plan for water use and disposal when conducting a pressure test, companies are directed to the guidelines for "Hydrostatic Test Water Management" jointly sponsored by the Canadian Association of Petroleum Producers and the Canadian Energy Pipeline Association.

General Testing Requirements

GOAL: To ensure that pressure testing is conducted objectively.

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| 25. | (1) | Pressure testing shall be performed under the direct supervision of the company or an agent appointed by it. |
| | (2) | The agent referred to in subsection (1) shall be independent of any contractor that carries out the pressure testing program or that constructed the pipeline. |
| | (3) | The company or agent referred to in subsection (1) shall date and sign any logs, test charts and other test records that are referred to in CSA Z276 or CSA Z662, as applicable. |

GOAL: To ensure that as much of the pipeline system as practicable is subjected to the required pressure test.

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| 26. | If pre-tested pipe assemblies or segments are installed in a pipeline, the number of welds in the installations or segments that are not subjected to a pressure test shall be minimized to the extent that is practicable. |
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PART 6

OPERATION AND MAINTENANCE

Operation and Maintenance Manuals

GOAL: To ensure that Operation and Maintenance Manuals are developed and remain current.

27. A company shall develop, regularly review and update as required, operation and maintenance manuals that provide information and procedures to promote safety, environmental protection and efficiency in the operation of the pipeline, and shall submit them to the Board when required to do so under section 7.

GUIDANCE NOTE

INTENT: To provide examples of information which could be included when developing the manuals.

Operation and Maintenance Manuals should be considered as information, documentation or procedures which may be available in electronic or paper copy form. In addition to the information and procedures outlined in the applicable standards referred to in section 4, Operation and Maintenance Manuals could include:

- (a) material and equipment specifications;
- (b) the elevation profile for pipelines containing liquid hydrocarbons;
- (c) the maximum operating pressure of the pipeline and the method for maintaining the pressure limits under all operating conditions;
- (d) a description of the physical characteristics of the product to be transported in the pipeline which could include:
 - (i) the phase (liquid or gas) of the product under normal operating conditions,
 - (ii) the phase of the product under standard temperature and pressure,
 - (iii) the specific gravity relative to water for liquids and relative to air for gases,
 - (iv) the flash point for liquids and the ignition and flammability characteristics for gases,
 - (v) the colour and smell of the product, and
 - (vi) the associated toxic effects;
- (e) the location of the pipeline and the means of access to it;
- (f) the start up, operation and shut down procedures for stations and the related safety precautions ;
- (j) the applicable information outlined in section 40 relating to the pipeline integrity management program;
- (h) information and procedures for the pipeline control system as outlined in section 37 including:
 - (i) the supervisory control and data acquisition system, if applicable,
 - (ii) the communication facilities,
 - (iii) the procedures used to detect leaks and respond to alarms , and
 - (iv) the procedures used to detect any malfunctions of the control system, including details of the corrective action to be taken;
- (i) the policies and procedures for accident prevention and fire protection;
- (j) the environmental protection policies and procedures for all of the applicable pipeline activities as outlined in section 48;
- (k) the policies and procedures of the training program referred to in section 46; and
- (l) the policies and procedures of the safety program referred to in section 47.

GOAL: To ensure all applicable parties are aware of information contained in the Operation and Maintenance Manuals.

28. A company shall inform all persons associated with operation activities on the pipeline of the practices and procedures to be followed and make available to them the relevant portions of the operation and maintenance manuals.

Maintenance Safety

GOAL: To ensure that maintenance activities are conducted in a safe manner.

29. (1) If a company contracts for the provision of services in respect of the maintenance of a pipeline, the company shall:
- (a) inform the contractor of all special conditions associated with the maintenance;
 - (b) inform the contractor of all special safety practices and procedures necessitated by the conditions or features specific to the maintenance;
 - (c) take all reasonable steps to ensure that maintenance activities are conducted in accordance with the manual developed under section 31; and
 - (d) authorize a person to halt a maintenance activity in circumstances where, in the person's judgement, the maintenance activity is not being conducted in accordance with the manual developed under section 31 or is creating a hazard to anyone at the maintenance site.
- (2) The person referred to in paragraph (1) (d) must have sufficient expertise, knowledge, and training to competently carry out the obligations set out in that paragraph.

GOAL: To ensure that the public and the environment are protected during maintenance activities.

30. A company shall, during the maintenance of a pipeline, take all reasonable steps so that
- (a) the maintenance activities do not create a hazard to the public or the environment; and
 - (b) all persons at the maintenance site who are not involved in the maintenance of the pipeline are informed of the practices and procedures that are to be followed for their safety or for the protection of the environment.

GOAL: To ensure that specific safety procedures are in place and are made available to all applicable personnel.

31. (1) A company shall develop a maintenance safety manual and shall submit it to the Board when required to do so under section 7.
- (2) The company shall keep a copy of the maintenance safety manual or the relevant parts of it at each maintenance site of the pipeline, in a location where it is accessible to every person engaged in maintenance at the site.

GUIDANCE NOTE

INTENT: To outline issues which could be addressed when developing and documenting safe maintenance practices and procedures.

The company documentation could set out:

- (a) the safety related responsibilities of company and contractor managers, supervisors and workers;
- (b) the safety practices and procedures to be followed in the maintenance of the pipeline; and
- (c) the name(s) or position(s) of the person(s) with suitable qualifications responsible for safety inspections during pipeline maintenance activities where applicable.

Emergency Procedures Manual

GOAL: To ensure applicable emergency procedures are developed, are current and are on file with the Board.

32. (1) A company shall develop, regularly review and update as required, an emergency procedures manual.
- (2) A company shall submit the emergency procedures manual and any updates that are made to it to the Board.

GUIDANCE NOTE

INTENT: To provide assistance in the development of the Emergency Procedures Manual.

The Emergency Procedures Manual could include a local emergency roster including the names, addresses, telephone numbers and contact persons in agencies that may have to be contacted in case of an emergency, such as: medical facilities and services, law enforcement, fire departments, public utilities, applicable government departments and agencies, qualified contractors, industry emergency response cooperatives, equipment suppliers, and the media.

For assistance in developing the Emergency Procedures Manual, companies are directed to CSA Z731 "Emergency Planning for Industry". The Emergency Procedures Manual developed by a company should, at a minimum, provide for the same level of preparedness, safety and response capability as a manual prepared according to CSA Z731.

GOAL: To ensure that all applicable agencies are aware of the contents of the Emergency Procedures Manual.

33. A company shall establish and maintain liaison with the agencies that may be involved in an emergency response on the pipeline and shall consult with them in developing and updating the emergency procedures manual.

GOAL: To ensure that all applicable parties are prepared to respond to emergency situations.

34. A company shall take all reasonable steps to inform all persons who may be associated with an emergency response activity on the pipeline of the practices and procedures to be followed and make available to them the relevant information that is consistent with that which is specified in the emergency procedures manual.

Continuing Education Program

GOAL: To ensure all appropriate parties are aware of the potential emergency situations and their specific roles and responsibilities.

35. A company shall develop a continuing educational program for the police, fire departments, medical facilities, other appropriate organizations and agencies and the public residing adjacent to the pipeline to inform them of the location of the pipeline, potential emergency situations involving the pipeline and the safety procedures to be followed in the case of an emergency.

GUIDANCE NOTE

INTENT: To provide assistance for implementing a continuing education program.

All persons within identified hazard zones should be included as participants in the continuing education program. Hazard zones may be identified by using empirical data or through risk-based techniques. The use of risk-based techniques is encouraged by the Board.

General Operation Requirements

GOAL: To ensure that a pipeline system provides safe and efficient service.

36. A company shall
- (a) maintain communication facilities for the safe and efficient operation of the pipeline and for emergency situations;
 - (b) periodically test instruments and equipment at the pipeline stations to verify their proper and safe operation;
 - (c) continually record the suction and discharge pressures of the pipeline pump and compressor stations;
 - (d) clearly mark the open and closed positions of sectionalizing valves on any main line;
 - (e) clearly mark the open and closed positions and the function of isolating valves blow-down valves, and other major valves within a pipeline station; and
 - (f) post along the boundaries of the pipeline stations signage indicating the name of the company and the telephone number to call in the event of an emergency involving the pipeline.

Pipeline Control System

GOAL: To ensure that pipeline operating parameters are being adequately monitored.

37. A company shall develop and implement a pipeline control system that
- (a) comprises the facilities and procedures used to control and monitor the operation of the pipeline;
 - (b) records historical pipeline operation data, messages and alarms for recall; and
 - (c) includes a leak detection system that, for oil pipelines, meets the requirements of CSA Z662 and reflects the level of complexity of the pipeline, the pipeline operation and the products transported.

Maintenance Welding

GOAL: To ensure appropriate welding procedures are employed which prevent cold cracking in steels with high carbon equivalents.

38. (1) A company shall not perform welding on a liquid-filled pipeline with a carbon equivalent of 0.50% or greater, except if it has been demonstrated that no other practical alternative is available.
- (2) If a company performs welding referred to in subsection (1), the company shall treat the weld as a temporary installation and replace that installation with a permanent one as soon as is practicable.
- (3) Despite subsections (1) and (2) and section 16, if a company intends to perform welding on a liquid-filled pipeline with a carbon equivalent of 0.50% or greater and to treat it as a permanent installation, the company shall submit the welding specifications and procedures and the results of the procedure qualification tests to the Board for approval.

GUIDANCE NOTE

INTENT: To provide assistance in calculating the Carbon Equivalent (CE).

Companies are referred to CSA Z662 for the calculation of CE. Where it is impractical to obtain a complete chemical analysis of the pipe material, the following equation should be used:

$$CE = C + Mn/6.$$

Monitoring and Surveillance

GOAL: To ensure protection of the pipeline, the public, and the environment is maintained during the operation of the pipeline.

39. A company shall develop a monitoring and surveillance program for the protection of the pipeline, the public and the environment.

GUIDANCE NOTE

INTENT: To provide guidance in developing a monitoring and surveillance program.

The monitoring and surveillance program should meet the requirements of sections 40 and 48 and the applicable standards referred to in section 4.

Pipeline Integrity

GOAL: To ensure that pipelines are suitable for continued safe, reliable and environmentally responsible service.

40. A company shall develop a pipeline integrity management program.

GUIDANCE NOTE

- INTENT:**
- 1) To provide examples of acceptable practices which could be included in an integrity management program;
 - 2) To emphasize the importance of a documented, proactive, comprehensive, continuous process supported by senior management; and
 - 3) To encourage the use and development of technology and analytical methods.

A company should take reasonable steps to maintain an effective integrity management program (IMP) and to address the integrity of its pipeline system through this program. Pipeline systems should be inspected periodically and repaired if necessary, so that they are suitable for continued safe, reliable and environmentally responsible service.

The IMP could include the following four components:

1. A management system which should consider:
 - (a) the program scope, including description of facilities, goals and objectives;
 - (b) the organizational lines of responsibility for the integrity program, including the reporting requirements to senior management;
 - (c) the training of management and staff required to develop and execute the integrity management program;
 - (d) the qualifications of consultants and contractors required to develop and execute the integrity management program;
 - (e) the methods of keeping abreast of industry practice and current research activities;
 - (f) the methods to be used to manage change in respect of the design, construction and operation of the pipeline; and
 - (g) the methods to be used to measure the effectiveness of the program.
2. A working records management system (RMS) which should consider, in addition to the requirements of the applicable standards referred to in section 4 of the *Onshore Pipeline Regulations*:
 - (a) the maintenance of an RMS that would allow timely access, by section , to records regarding the pipeline system. Where practicable, the RMS should include information on the original pipe and all modifications and repairs such as:
 - (i) pipe material, manufacturer and date of manufacture, category, seam and girth weld type, grade, welder identification, non-destructive examination records, heat number, weld maps (e.g. weld number, non-destructive examination type and number),
 - (ii) coating type for line pipe, joints and tie-ins, manufacturer, application method and weather conditions at the time of application,
 - (iii) repair history (e.g. location and type of repair, type and specification of sleeves, hot taps, grinding, cut-outs and replacements, type of defects cut out or repaired, major coating repairs, and re-coating specifications),
 - (iv) mapping (e.g. location of pipelines including class location, depth of cover, location of buried valves and flanges, and geotechnical data),
 - (v) all pressure test data and records, maximum operating pressure, construction drawings, in-line inspection (ILI) tool data and reports, corrosion control and cathodic protection records including design and survey results,
 - (vi) inspection records of pressure relieving and emergency shutdown devices, and
 - (vii) valve inspection records;
 - (b) documentation of condition monitoring and mitigation programs and past condition monitoring and mitigation decision analyses; and
 - (c) reviews of integrity management program effectiveness as outlined in 1(g).
3. Condition monitoring is intended to be a proactive process where the various components of the process are reviewed on an ongoing basis and updated as necessary. A condition monitoring program should consider:

- (a) an internal inspection with ILI tools (e.g. caliper, metal loss), where such tools are commercially available, for all steel pipelines operating above 30% specified minimum yield strength
 - (b) an engineering assessment (EA) of pipeline segments to address pipeline integrity. Both time-dependent (e.g. corrosion, stress corrosion cracking, hydrogen induced cracking and fatigue) and non-time-dependent (e.g. manufacturing defects, third party damage and geotechnical (e.g. slope instability and stream washout)) hazards that are to be considered and investigated in the EA. The EA should consider the results of such methods as pressure testing, use of ILI tools and investigative digs. Note that cathodic protection surveys are not by themselves considered adequate to determine pipeline integrity;
 - (c) the risk assessment (RA) method to be used when assigning priorities for integrity evaluation of facilities or line segments. Factors to be included in the RA are items such as: product handled; pipeline location; stress levels; product pressure; pipeline age and condition; coating age and condition; cathodic protection data and ILI data. Consideration should be given to determining the area affected (consequence) by a product release;
 - (d) where appropriate, monitoring and surveillance programs for slope movement, river crossings, depth of cover, frost heave and thaw settlement;
 - (e) a program to minimize third party damage including line patrols;
 - (f) the methods used to evaluate and maintain pipeline integrity and the criteria for their application, which may include :
 - (i) the use of the appropriate ILI tool technology and the methods used to verify ILI findings,
 - (ii) the hydrostatic retesting procedure,
 - (iii) the corrosion control monitoring methods and cathodic protection survey documentation,
 - (iv) the methods used to evaluate remaining life where defects exist,
 - (v) the methods used to verify the coating type and condition, and
 - (vi) any other methods for defect detection utilized;
 - (g) the procedures used to track, analyze and trend the condition of the pipeline and its coating; and
 - (h) the steps to be taken to evaluate the cause of a line or facility failure including the minimum investigation and documentation requirements (e.g. cut-out, metallurgical analysis).
4. Mitigation, to ensure integrity, which should include:
- (a) the criteria and procedures for evaluation of imperfections and repair of piping containing defects;
 - (b) the procedure for performing consequence analyses to establish repair priorities;
 - (c) the criteria and procedures for consideration of such measures as pipe replacement (e.g. cut-out), repair (e.g. grinding, sleeving (steel or fibreglass), hot taps, hot work, excavation procedures, maintenance welding, recoating, hydrostatic retesting and reduction in operating pressure (temporary or permanent); and
 - (d) an outline of the short-term (e.g. 1 to 3 year(s)) and long-term (e.g. 4 to 10 years) mitigation program plans and priorities.

GOAL: To ensure pipeline defects and corrective actions are adequately documented.

41. (1) If a company finds a level of defect in excess of that allowed by CSA Z662 on its pipeline, the company shall document the particulars of the defect, its likely cause and the corrective action taken or planned to be taken.
- (2) A company shall submit the documentation referred to in subsection (1) to the Board when required to do so under section 7.

Change in Class Location

GOAL: To ensure public safety is maintained as class location factors increase.

42. If the class location of a section of a pipeline changes to a higher designation that has a more stringent location factor, the company shall, within six months after the change, submit the proposed plan to deal with the change to the Board.

GUIDANCE NOTE

INTENT: To suggest issues which could be taken into account when developing a plan for dealing with increased class locations.

The plan could :

- (a) identify what changes in circumstances have occurred,
- (b) identify potential concerns resulting from the change in circumstances and,
- (c) describe the mitigative actions where applicable, to address potential concerns.

Where appropriate, a population density survey should also be done at periodic intervals (3 years is recommended) to identify any change in class location.

Change of Service or Increase in Maximum Operating Pressure

GOAL: To ensure adequate levels of safety are maintained for any change of service or increase in Maximum Operating Pressure.

43. If a company proposes a change of service or an increase in the maximum operating pressure for the pipeline, the company shall submit an application for the change or increase to the Board.

Deactivation and Reactivation

GOAL: To ensure that deactivation of a pipeline is carried out in a safe and environmentally responsible manner.

44. (1) If a company proposes to deactivate the pipeline or a section of it for 12 months or more or has maintained the pipeline or a section of it in a deactivated mode for 12 months or more or has not operated the pipeline or a section of it for 12 months or more, the company shall submit an application for the deactivation to the Board.
- (2) The application shall include the rationale for the deactivation and the measures to be employed or that were employed for the deactivation.

GOAL: To ensure that reactivation of a pipeline is carried out in a safe and environmentally responsible manner.

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| 45. | (1) | If a company proposes to reactivate the pipeline or a section of it that has been deactivated for 12 months or more, the company shall submit an application for the reactivation to the Board. |
| | (2) | The application shall include the rationale for the reactivation and the measures to be employed for the reactivation. |

Training Program

GOAL: To ensure employees are trained in the applicable safety and operating procedures required to conduct their duties.

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| 46. | (1) | A company shall develop and implement a training program for any employee of the company who is directly involved in the operation of the pipeline. |
| | (2) | The training program shall instruct the employees on <ul style="list-style-type: none">(a) the safety regulations and procedures applicable to the day-to-day operation of the pipeline;(b) responsible environmental practice and procedures in the day-to-day operations of the pipeline;(c) the procedures for the proper operation of the equipment that the employee could reasonably be expected to use; and(d) the emergency procedures set out in the manual developed under section 32 and the procedures for the operation of all emergency equipment that the employee could reasonably be expected to use. |
| | (3) | The company shall use reasonable efforts to ensure that any employee who attends a training program has a working knowledge of the subject-matter of the program at the end of the program. |

GUIDANCE NOTE

INTENT: To outline information which could be addressed in the training program.

The training program could include the following :

- (a) the general objectives of the training program;
- (b) the types and format of training to be used;
- (c) a description of the testing methods and dry-run exercises, and their frequency; and
- (d) the effectiveness of the training.

Training programs should be directed towards the operation and maintenance of pipelines in a safe and effective manner and should include provision for the safety of the public and the protection of the environment.

Safety Program

GOAL: To ensure that safety concerns are addressed.

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| 47. A company shall develop and implement a safety program to anticipate, prevent, manage and mitigate potentially dangerous conditions and exposure to those conditions during all construction, operation and emergency activities. |
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GUIDANCE NOTE

INTENT: To outline information which could be addressed in the safety program.

The safety program could include:

- (a) the safety policy;
- (b) the responsibility and accountability for safety;
- (c) the organization of safety committees;
- (d) safety education and training;
- (e) the safety inspection system;
- (f) incident investigations, reporting, corrective actions and statistics; and
- (g) the safe working practices and procedures.

Environmental Protection Program

GOAL: To ensure that appropriate environmental protection programs have been developed.

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| 48. A company shall develop and implement an environmental protection program to anticipate, prevent, mitigate and manage conditions which have a potential to adversely affect the environment. |
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GUIDANCE NOTE

INTENT: To provide references and suggested topics which could be used when developing an environmental protection program.

An environmental management system which outlines the organizational structure, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining a company's environmental policy should be considered as part of the environmental protection program. For guidance in developing an environmental management system companies could consider using the applicable provisions of the ISO 14000 Series of Standards. In addition, an environmental protection program could include:

- (a) ongoing environmental training for employees,
- (b) practices and procedures utilized during construction, operation and maintenance of the pipeline,
- (c) the waste management practices and procedures used to identify, handle and dispose of all wastes associated with the construction, operation and maintenance of the pipeline,
- (d) vegetation management practices and procedures,
- (e) erosion control practices and procedures on the right-of-way and access roads,
- (f) practices and procedures for the management of air and noise emissions,
- (g) soil conservation practices and procedures,
- (h) practices and procedures regarding travel on the right-of-way,

- (i) a monitoring and surveillance program that addresses environmental issues related to construction, operation and maintenance of the pipeline. The level of monitoring and surveillance should consider the sensitivity of the environment both on and adjacent to the right-of-way and the pipeline's potential environmental impact. The program could include, where appropriate:
- those components of the environment involved in verifying environmental assessment predictions made at the application stage;
 - those components involved in determining the effectiveness of applied mitigation measures; and
 - a methodology which allows for the identification of environmental issues not anticipated during the application stage.

Board Authority

GOAL: To identify the Board's authority in ensuring pipelines are operated and maintained in a safe and environmentally responsible manner.

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| 49. When the protection of property and the environment and the safety of the public and the company's employees warrant it, the Board may direct a company to test, inspect or assess a pipeline in accordance with CSA standards or any other comparable standards. |
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PART 7

ABANDONMENT

Application for Leave to Abandon

GOAL: To ensure abandonment of pipelines is done in a safe, efficient and environmentally responsible manner.

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| 50. An application made by a company under section 74 of the Act for leave to abandon a pipeline or a section of one shall include the rationale for the abandonment and the measures to be employed in the abandonment. |
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GUIDANCE NOTE

INTENT: To suggest references which provide additional information on issues which should be addressed in applications for abandonment.

An application for abandonment of a pipeline should include plans to remove the pipeline or to leave the abandoned pipeline in place. If the pipeline is to be removed, the impact of the removal process on the environment should be described. If the pipeline is to be abandoned in place, the company is directed to CSA Z662 Clause 10.

For additional information on issues to be addressed when abandoning a pipeline, applicants are directed to the Board's *Guidelines for Filing Requirements* and to "Pipeline Abandonment - A Discussion Paper on Technical and Environmental Issues" and "Legal Issues Relating to Pipeline Abandonment: A Discussion Paper" which are available from the Alberta Energy and Utilities Board and the National Energy Board.

PART 8

REPORTING

Crossing Reports

GOAL: To ensure the Board is aware of potential or actual effects associated with a pipeline crossing a utility or a private road.

51. If a company constructs a pipeline that crosses a utility or private road, the company shall
- (a) immediately notify the Board of the details of unplanned interruption in the operation of the utility or any unplanned closure of the road if the interruption or closure results from the construction of the crossing; and
 - (b) on request, submit a crossing report to the Board that sets out
 - (i) the description and location of the utility or road, and
 - (ii) the name of the authority having control over the utility or the name of the owner of the road.

Incident Reports

GOAL: To provide timely and factual reporting of all incidents.

52. (1) A company shall immediately notify the Board of any incident relating to the construction, operation or abandonment of its pipeline and shall submit a preliminary and detailed incident report to the Board as soon as is practicable.
- (2) After notification of an incident, an inspection officer may partially or completely relieve a company from the requirement to submit a preliminary and detailed incident report.

GUIDANCE NOTE

INTENT: To provide an outline of the information which could be included in incident reports.

Effective **01 September 1999**, all incidents and occurrences as defined under the NEB *Onshore Pipeline Regulations, 1999* and the *Canada Labour Code, Part II* should be reported to the **TSB Occurrence Hot Line (819) 997-7887** (collect calls accepted). Preliminary and detailed incident reports should also be directed to the TSB at the address indicated below. The TSB will forward all applicable reports to the NEB.

Transportation Safety Board of Canada
Place du Centre, 4th Floor
200 Promenade du Portage
Hull, Quebec
K1A 1K8

E-mail: Roger.Hornsey@tsb.gc.ca
Larry.Gales@tsb.gc.ca

Fax: (819) 953-7876

A preliminary incident report should be provided as soon as practicable following the discovery of an incident and should set out, to the extent that the information is available:

- (a) the area affected, the substance involved and an estimate of the volume released, and the nature, location, date and time of the incident;
- (b) the name and occupation of every person killed as a result of the incident;
- (c) the name, occupation, condition and current location of every person that sustained a serious injury;

- (d) a description of any interruption of or reduction in service resulting from the incident;
- (e) a description of the actions taken by the company to protect the public and the environment;
- (f) a description of the repairs made or to be made by the company and the anticipated date of return to service of the pipeline;
- (g) the availability of the damaged parts of the pipeline;
- (h) the nature and extent of any adverse environmental effects;
- (i) the nature and extent of any concerns expressed to the company by the public related to the incident;
- (j) a descriptive assessment of any continuing hazards resulting from or related to the incident;
- (k) other significant facts that are known to be relevant to the cause of the incident; and
- (l) a list of the witnesses who notified the company, along with their addresses and telephone numbers.

A detailed incident report should be provided as soon as detailed information is available and should include:

- (a) a detailed description of the adverse environmental effects of the incident on terrain, property, livestock, fish, wildlife and habitat of fish and wildlife;
- (b) a description and evaluation of the clean-up and disposal methods used or proposed to be used;
- (c) a description of all measures taken or proposed to be taken to restore the terrain where the incident occurred;
- (d) a description of the monitoring undertaken or proposed to be undertaken to determine the success of restoration measures;
- (e) where the incident involved a spillage of LVP hydrocarbons, liquid test medium or any toxic substance, an outline of the program that the company proposes to follow to rehabilitate the affected area;
- (f) a description, sketch or photograph of the area affected by any fluids that escaped from the pipeline as a result of the incident;
- (g) a detailed description of the incident including the events leading up to and following the incident;
- (h) comments, sketches, drawings or photographs relevant to the incident that are necessary for a complete understanding of the incident; and
- (i) corrective actions to be taken to prevent similar incidents from occurring in the future.

For assistance in completing a detailed incident report companies are referred to the Board's "Detailed Incident Report" form.

PART 9

AUDITS AND INSPECTIONS

General Compliance

GOAL: To ensure companies implement an effective internal system that will ensure regulatory compliance for their pipelines.

53. (1) A company shall conduct an audit and an inspection on a regular basis to ensure its pipeline is designed, constructed, operated or abandoned in compliance with
- (i) Part III of the Act;
 - (ii) Part V of the Act, as it relates to the protection of property and the environment and the safety of the public and of the company's employees;
 - (iii) these Regulations; and
 - (iv) the terms and conditions of any certificate or order issued by the Board, as they relate to the protection of property and the environment and the safety of the public and of the company's employees.
- (2) The audit shall document
- (a) all non-compliance noted; and
 - (b) any corrective actions taken or planned to be taken.

Construction Inspection

GOAL: To ensure qualified inspectors are employed to monitor construction activities.

54. (1) When a company constructs a pipeline, the company or an agent independent of any construction contractor retained by the company shall inspect the construction to ensure that it meets the requirements of these Regulations and complies with the terms and conditions of any certificate or order issued by the Board.
- (2) An inspection shall be performed by a person who has sufficient expertise, knowledge and training to competently carry out the inspection.

Pipeline Control System and Safety Program Audits

GOAL: To ensure companies develop and implement a self audit program to ensure their facilities are operated in a safe, efficient and environmentally responsible manner.

55. (1) A company shall regularly conduct an audit of its
- (a) pipeline control system developed under section 37;
 - (b) safety program developed under section 47; and
 - (c) environmental protection program developed under section 48.
- (2) The documents prepared following the audit shall include
- (a) any deficiencies noted; and
 - (b) any corrective action taken or planned to be taken.

PART 10

RECORD RETENTION

Requirements

GOAL: To ensure the performance history of various safety and operating programs is well documented.

56. A company shall, in addition to complying with the record retention requirements set out in the CSA standards referred to in section 4, retain
- (a) until at least one month after the date on which they were recorded, the records made under paragraphs 36 (c) and 37 (b) except for leak detection data, which shall be retained for six months;
 - (b) an annual report on the training program developed under section 46 that compares the actual training received by employees to the planned training;
 - (c) for at least one year after the pipeline or the section of it is placed into service, any information with respect to the quality assurance program developed under section 15;
 - (d) for the most recent five years of operation or for the period covered by the two most recent complete audits, whichever period is the longer, the records for the audits and inspections required by sections 53 to 55;
 - (e) for as long as the installations referred to in section 38 remain on the pipeline, detailed records of those installations, including
 - (i) the location of the installation,
 - (ii) the type of installation,
 - (iii) the date of installation,
 - (iv) the welding procedure used,
 - (v) the carbon equivalent of the pipeline,
 - (vi) the results of the non-destructive testing performed on the installation, and
 - (vii) the planned date of removal of the installation;
 - (f) accurate records of the location of all buried facilities, until they are removed; and
 - (g) for at least two years after the operation of a pipeline or a section of one has been duly abandoned in accordance with all applicable requirements
 - (i) all records available to the company in respect of the procedures used in each stage of the manufacture of their construction,
 - (ii) the production reports and mill certificates,
 - (iii) the specifications and name-plate data, if any, of the pumps, compressors, drivers, storage tanks and other major equipment of the pipeline,
 - (iv) the performance curves of all main line pumps and compressors of the pipeline,
 - (v) the reports of all monitoring and surveillance programs developed under section 39,
 - (vi) the documentation referred to in section 41 in respect of pipeline defects, and
 - (vii) the documentation on all incidents reported under section 52.

Repeal

57. The *Onshore Pipeline Regulations*¹ are repealed.

Coming Into Force

58. These Regulations come into force on August 1, 1999 .

1 SOR/89-303

